

III. Remarks/Arguments:

Reconsideration of this application in light of the above amendments and the following remarks is requested. Claims 1-16 and 27-37 are pending in this application. Claims 17-26 and 38-48 were previously withdrawn. After the amendments detailed above, claims 1, 6, 9, 12, 15, 27, 28, 31, 33 and 37 have been amended, claims 2-5, 7, 14, 29, 30, 32, 34 and 36 have been canceled, and claims 8, 10, 11, 13, 16 and 35 have been maintained in their original form.

A. Rejections under 35 USC § 112, Second Paragraph

Claims 2-5, 7, 29-30 and 34 were rejected as being indefinite under 35 USC § 112, second paragraph due to the usage of a trademark or trade name in the claim language. These rejections are now moot as these claims have been canceled from the application.

Claims 6-7, 28 and 34 were rejected as being indefinite under 35 USC § 112, second paragraph for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In response to the Examiner's inquiry set forth in the Office action as to whether the layers of claim 6 (and also claim 28) are intended to be additional layers or further descriptive of layers referenced in the corresponding independent claims, the answer is both. Claims 6 and 28 have been amended to clarify the claim language, and therefore, claims 6 and 28 are now definite. As discussed above, claims 7 and 34 have been canceled.

Claims 9 and 31 were rejected as being indefinite under 35 USC § 112, second paragraph due to inclusion of the relative term "high." Claims 9 and 31 have been amended to remove this relative term, and therefore, claims 9 and 31 are now definite.

B. Discussion of Amended Independent Claims 1 and 27

Claim 1 was rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,327,811 to Price et al. (hereinafter "Price '811"). Claim 1 was additionally rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,591,933 to Li et al. (hereinafter "Li '933"). These rejections are moot as claim 1 has been amended, however, the Examiner is respectfully reminded that the PTO provides in MPEP §2131 that:

[t]o anticipate a claim, the reference *must teach every element of the claim*.... (emphasis added).

Neither Price '811 nor Li '933 discloses at least one woven layer and at least one non-woven layer of ballistic material joined by a "first and second series of connectors forming a quilting pattern defining bounded areas of unconnected material" as claimed in amended independent claim 1. The cited references are discussed in turn.

Price '811 is directed to a ballistic protective vest having front and back ballistic packages formed of ballistic resistant material. Price '811 discloses the use of stitching to join a woven fabric package and a non-woven fabric package. As shown in Fig. 11, the ballistic resistant material is sewn together in a box stitch pattern 72 and outwardly extending stitched rays 74. *See col. 5, lines 35-38; see also Fig. 11.* As such, the box stitch pattern 72 and the outwardly extending stitched rays 74 of Price '811 clearly do not form a quilting pattern defining bounded areas of unconnected material for the woven and non-woven materials. Therefore, the Price '811 reference cannot support an anticipation rejection of amended claim 1.

Moreover, it would not be obvious to modify the teachings of Price '811 to arrive at the claimed subject matter of Applicant's amended claim 1. Specifically, Price '811 teaches away from forming a quilting pattern defining bounded areas of unconnected material. In reference to the box stitch pattern 72 and the outwardly extending stitched rays 74, Price '811 states that "[i]t should be noted that the seam lines [72, 74] do not intersect[, which] prevents the possibility of the needle penetrating the ballistic units twice in the same area." *Col. 5, lines 38-41.* Therefore, given this teaching of Price '811, it would be untenable to stretch Price '811 to cover ballistic resistant material having intersecting connectors forming bounded areas of unconnected material as claimed in amended claim 1.

Li '933 is directed to a penetration resistant composite having a stitching arrangement in which the stitch length is larger than the stitch path. Reviewing Figs. 1 and 3 of Li '933, the stitching paths 14 and 16 clearly do not form a quilting pattern defining bounded areas of unconnected material, and therefore, Li '933 cannot support an anticipation rejection of amended claim 1.

Furthermore, it would not be obvious to rearrange the stitching pattern of Li '933 to achieve a "quilting pattern defining bounded areas of unconnected material" as claimed in amended claim 1. The gist of the invention disclosed in Li '933 is to provide a stitching arrangement in which "the stitch length must be greater than the stitch path." *Col. 3, line 62.* In fact, according to Li '933, "[t]he relationship between the stitch path and the stitch length is critical to the advantages of the invention." *Col. 3, lines 58-60.* To achieve the purpose of the invention, Li '933 discloses a stitching path following a wave-like pattern in which a portion of the stitching 14, 16 exits one end of the composite 10, passes through the

composite in a staggered, or straight, path, and exits an opposing end of the composite to continue the path. Given the importance of the stitching pattern to the teachings of Li '933, there is clearly no motivation or suggestion to alter the stitching pattern of Li '933 to arrive at the claimed subject matter of amended claim 1.

C. Discussion of Amended Independent Claim 27

Claim 27 was rejected under 35 U.S.C. § 102(b) as being anticipated by Price '811. Claim 1 was additionally rejected under 35 U.S.C. § 102(b) as being anticipated by Li '933. Claim 27 has been amended to incorporate language similar to the language incorporated into claim 1, and more specifically, to describe a method of forming a lightweight ballistic panel in which the intermittent interconnection of the layers in first and second directions defines "a quilting pattern forming bounded areas of unconnected material." For the reasons set forth with respect to amended claim 1, amended claim 27 now patentably defines over each of Price '811 and Li '933.

Claim 27 was additionally rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,989,266 to Borgese et al. (hereinafter "Borgese '266"). This rejection is moot as claim 27 has been amended, however, the Examiner is respectfully reminded that the PTO provides in MPEP §2131 that:

[t]o anticipate a claim, the reference *must teach every element of the claim*.... (emphasis added).

Borgese '266 does not disclose a lightweight ballistic panel formed by "intermittently interconnecting a small portion of the layers in a first direction and intermittently interconnecting a small portion of the layers in a second direction intersecting the first direction, the intermittent interconnection in the first direction and the second direction defining a quilting pattern forming bounded areas of unconnected material" as claimed in amended claim 27. Rather, Borgese '266 merely discloses a body armor insert 10 in which the ballistic resistant material 14, 16 of the insert is sewn together "along the upper shoulder regions of the body armor insert." *Col. 2, lines 61-63; see also Figs. 1 and 4*. As such, Borgese '266 cannot support an anticipation rejection of amended claim 27.

Moreover, Borgese '266 does not render amended claim 27 obvious. Specifically, Borgese '266 teaches away from the subject matter of amended claim 27 in stating that "[i]t is preferred to have no other stitching through the polyethylene plies 16 [other than the seams 20]" *Col. 2, lines 63-68*. Therefore, there is clearly no motivation or suggestion to alter Borgese '266 to arrive at the claimed subject matter of amended claim 27.

D. Discussion of Amended Independent Claims 15 and 37

Dependent claims 15 and 37 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim. Claims 15 and 37 have been rewritten in independent form to recite the limitations of base claims 14 and 36, respectively, in order to place the claims in allowable form. Applicant appreciates the Examiner's allowance of these claims.

E. Conclusion

Based on the foregoing, independent claims 1, 15, 27 and 37 are now in condition for allowance. As dependent claims 6, 8-13, 16, 28, 31, 33 and 35 depend from and further limit their respective independent claims, these claims are now in condition for allowance as well. An early formal notice of allowance of claims is requested.

Should the Examiner deem that any further amendment is desirable to place this application in condition for allowance, the Examiner is invited to telephone the undersigned at the below listed telephone number.

Respectfully submitted,


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